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J. E. JOHNSON.

Apiarian Ideas Changing.
ROBT. WEST.

AMERICAN BEE JOURNAL

WEEKLY—\$1.00 A YEAR.

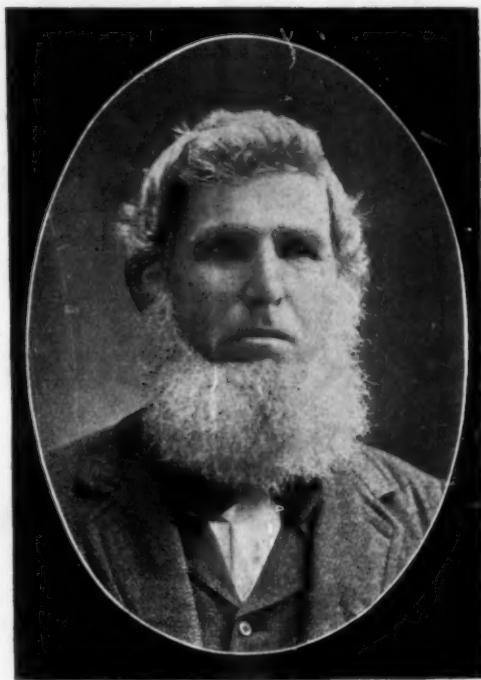
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44th Year.

CHICAGO, ILL., JUNE 9, 1904.

No. 23.

WEEKLY



THE LATE C. THEILMANN.
(See page 405.)

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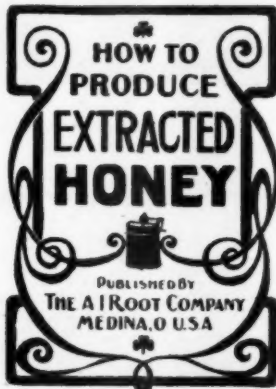
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AMERICAN BEE JOURNAL

ESTABLISHED IN 1861

THE OLDEST BEE-PAPER IN AMERICA

Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

Published Weekly at \$1.00 a Year by George W. York & Co., 334 Dearborn St.

GEORGE W. YORK, Editor.

CHICAGO, ILL., JUNE 9, 1904.

Vol. XLIV—No. 23,

Editorial Comments

The St. Louis Convention of Bee-Keepers.

The next National Convention will be held in St. Louis, Mo., Sept. 27, 28 and 29. So we were informed by General Manager France on May 28, which is the first official notice we have received. Sept. 27 and 28 are to be International Days; Sept. 29, National Day; and Sept. 30 Bee-Inspectors' Day. Those ought to be four great days for the bee-keepers' of the world, and especially for American bee-keepers. Plenty of time to get ready for a good time.

Bogus Comb Honey and Ladies' Home Journal.

Our attention has been called to the following paragraph, which unfortunately appeared in that usually high authority among all the magazines—the Ladies' Home Journal for June:

"One cause of indigestion from candy-eating is an adulterant that is sometimes employed—paraffin. This is especially used in caramels in order to make them cut well when poured out on the mould, and it is sometimes found in old-fashioned molasses candy. A most ingenious use to which paraffin has been put in America has been the manufacture of artificial honey-comb. It duplicates the natural comb remarkably well; the little cells are then filled with glucose slightly flavored to give the honey taste, and the artificial product is ready for use. This is not harmful, but it is not honey. Paraffin is not a poison, but it is an adulterant, and taken into the stomach it is indigestible."

This paragraph appears under the department heading, "Pretty Girl Papers," written by Emma E. Walker, M.D., the special topic being, "Is Candy-Eating Harmful to Girls?"

It is simply an echo of the seemingly unkillable Wiley lie about manufactured comb honey, which was started over 20 years ago. But we are surprised to find that a paper of such immense circulation and accustomed reliability as the Ladies' Home Journal, should help to continue the misleading and fraudulent statement that honey-combs are made of paraffin, filled with glucose, etc.

We have written Mr. Edward Bok, editor of the Ladies' Home Journal, calling his attention to the untruthful and harmful statement, and requesting the publication of a correction in the first possible issue of his journal. We have no doubt he will be glad to do this, for we are quite certain that Editor Bok would not willingly and knowingly publish what is not true.

We would urge that all our readers also write Mr. Bok, protesting against the appearance of that miserable old comb-honey canard in the Ladies' Home Journal. As the bee-keepers—and especially our women readers—swarm around him with their buzzing letters, he will begin to see that even the statements of some M. D.'s need to be edited. This thing of would-be instructors repeating hearsay matters, or what they possibly have read in some daily newspaper, without taking the least trouble to verify, needs to be stopped. Mr. Bok now has a fine opportunity to set his million subscribers right on the comb-honey question, and as far as possible undo the wrong done to bee-keepers, of which his journal—doubtless unconsciously—has been guilty.

Address letters on this subject as follows: Mr. Edward Bok, Editor Ladies' Home Journal, Philadelphia, Pa.

Newspaper Advertising of Honey.

There are various forms of advertising the use of honey, but perhaps the one that is the most easily and cheaply to be employed at present is that of a contribution detailing briefly the great value of honey as a daily food. There is scarcely an editor or publisher of a weekly or daily newspaper anywhere who would not gladly welcome such contribution or article from his bee-keeping neighbors or friends who subscribe for and read his paper. It is also one of the very best ways of acquainting the general public with honey and its uses.

Mr. J. E. Johnson, a wide-awake bee-keeper of Knox Co., Ill., and one of our esteemed correspondents, has been working along this line lately, and is succeeding. The following is a sample of his efforts, which recently appeared in the Galesburg (Ill.) Evening Mail:

FOOD VALUE OF HONEY.

Few people know the true value of honey as food. A great many children are daily overtaxing their delicate digestive organs and laying the foundation for an invalid life by the excessive use of sugar, candy, and other delicate sweetmeats. If their parents would only give them honey instead, they would not only find it a good, wholesome food, but very restful to their digestive organs, as honey is the only sweet that is practically predigested.

First, let us look into the history of honey. In olden times honey was probably the only very sweet food known, and is quite often mentioned in the Bible. The sons of Israel took honey and spices with them as presents when they went down into Egypt for corn. (See Genesis, 43d chapter.)

In Exodus, 16th chapter, we find that the manna sent from heaven to the children of Israel, tasted like "wafers made with honey." In I. Samuel, 14th chapter, we find that when Jonathan came to the wood he found honey upon the ground, and when he tasted of that honey his eyes were enlightened, and by the knowledge gained Saul's army was able to overcome the enemy. Bees must have been plentiful in those days. They even took up their abode in the big lion that Samson slew, and Samson was fond of honey, and, judging by his great strength, honey must have agreed with him. Several years ago Prof. Benton went to Palestine to investigate the bee-industry, and the result was that we have a particular strain of bees known as the Holy Land bees. They are much like the Italian bees, and are now scattered widely over the United States.

We also find that John the Baptist lived on honey and locusts, and in the last chapter of Luke we find that Christ, the Son of God, partook of honey before the disciples just before ascending to heaven.

The honey to-day is just the same as it was in olden times. It is one of Nature's sweets. But let us look into the matter from a scientific point of view. The physician often recommends honey for sore throat, coughs, and because honey is not only predigested to a great extent, but it is a very good antiseptic. The best remedy known to medical science for fumigating to kill disease germs is formaldehyde gas, because it unites with the oxygen of the air to produce formic acid, and is therefore effectual. Years ago this was not known, and the only means known then to obtain formic acid was from bees or ants, and, strange as it may seem, formic acid, that great germicide, always occurs in honey, and is one of the natural products of the honey-bee; and, although honey does not contain this formic acid in large enough quantity to make it a germicide, it is, however, antiseptic to a considerable extent, and is therefore very valuable in preventing disease. Dr. Gandy, of Nebraska, says that honey is a sure preventive of that dreaded Bright's disease of the kidneys.

I have found honey very valuable in curing tonsillitis by holding honey in the throat so as to keep the tonsil in contact with the honey. A few years ago liquid honey put up in glass tumblers was largely adulterated, but now Illinois has a pure food law which has driven out the adulterated article, and honey bought on the market anywhere in Illinois is the true product of the honey-bee, whether liquid or comb.

Comb honey can not be made artificially. One thousand dollars standing reward has long been offered for a single pound of artificial comb honey. No one has been able to claim it. Any syrup labeled

"Honey Drip" or "Honey Drops" is, of course, not honey, but all liquid honey labeled "Pure Honey" is reasonably sure to be pure honey. J. E. JOHNSON.

It is always well to present the newspaper editor and publisher with a sample of the kind of honey you are writing about. It will help him to understand your enthusiasm over so good a food article as honey—just *why* you are anxious that all the people shall know what they are really missing when they substitute cheap corn-syrup concoctions for genuine bees' honey.

It may be that after the favored editor has indulged his own taster in the real thing, he will add a word of personal endorsement to what has been written by his bee-keeping friend and subscriber.

No doubt there are some of our readers who will say, "O, I can't write well enough to do that." Well, then take to your local editor an article written by some one—say Mr. Johnson's—and kindly request him to publish it in his paper. He will doubtless be glad to do so, when he knows that it has your approval. You will then be his authority back of it, and it will go far in enlisting his aid and interest. And all this is not entirely a selfish matter on your part, as it will be a benefit to all his readers.

It may be you have some honey to sell to the readers of the newspaper in which you request the publication of the article referred to. Then it is your opportunity to place your order for a nice paid advertisement in that same newspaper. This will please the editor very much. And, no doubt, he will be glad to take his pay for it in honey.

Why not begin to think about the plan suggested, and put it into operation as soon as this season's honey crop is harvested? Go to the editor of your local newspaper with the contribution on the use of honey as a daily food, and request him to publish it. Also, present to him at the same time a nice sample of your honey. Perhaps it would be well then and there to leave with him your order for an advertisement of honey. If you are a loyal financial supporter of his paper, he is not likely to decline to publish the contribution. It is not easy to "turn down" a good friend and neighbor when so reasonable a request is made. And the information thus given will not only benefit you as a honey-producer, but will be a blessing to those who read it, and who doubtless will follow the suggestions given on the use of honey.

Try it, and then let us hear the results.

Discouraging for Southern California Bee-Keepers.

We have received the following from an extensive bee-keeper in San Diego Co., Calif., dated May 15:

EDITOR YORK:—The enclosed clipping only partially tells the story, as seven car-loads of bees were shipped to Nevada from this station—10 in all. The shippers had all sorts of bad luck. The first two were thrown off the track the second day, and 30 or 40 colonies ruined.

Owners of one car-load, after arriving at the end of the journey, put 210 colonies in a trail wagon, with a lot of junk on top of all. The team of eight or ten horses was driven with a jerk-line (one-line only, and that on a leader), ran the wagon off the bridge and dumped 50 hives off into the water; the team ran away, and played smash with the remainder. One man lost 40 colonies hauling them to our station.

One car, when up near Stockton (opposite San Francisco), ran into a heavy rain-storm, and going over the Sierras it snowed, and icicles formed on the sides of the hives, a good deal of brood being chilled, and a large percent of the old bees died on the way. All went in open cattle-cars. Some shippers got out of their cars, at the end of their journey, into a snow-storm—most of the men contracted bad colds, and altogether had a miserable trip. In this vicinity all the bees will starve if not fed, many having already "gone up the spout," as there is not a drop of nectar in the flowers. Those near orange or lemon groves may possibly pull through. Mr. Hambaugh took one car. We sent one, too. The trip is over 1000 miles long—over past Sacramento and in toward Salt Lake.

The clipping referred to in the foregoing, reads thus:

Car-load shipments of bees are to be shipped from this county to Nevada, where the feed is more plentiful. The district where the feed is scarce, and where it is necessary to ship the bees away in order to save them, is near the coast. In the mountain sections there is feed sufficient to sustain life, although not enough for honey-producing. A car-load of bees was shipped from the Linda Vista station yesterday. One or two have been shipped from Escondido.

Surely, this is very discouraging to bee-keepers located in the Southern coast counties of California, where the bulk of the honey of California is usually produced.

Cleansing Beeswax.

Put the vessel containing the melted wax in a box whose bottom is covered 5 inches deep with sawdust; surround the vessel on all sides with sawdust and cover over. The wax will stay hot a long time, and the slow cooling will allow all impurities to settle to the bottom. So says an item in Praktischer Wegweiser.

Miscellaneous Items

Notice.—The Deputy Inspector of Apiaries can call upon any bee-keeper within 25 miles of Chicago, to give assistance about treating diseases of bees. Mail your requests to Herman F. Moore, Deputy Inspector of Apiaries, Park Ridge, Ills.

General Manager France is having plenty to do in the work of the National Bee-Keepers' Association. He wrote us May 28:

FRIEND YORK:—Because one of our members did not buy goods of a newly-elected city mayor of Kirkwood, Ill., an ordinance is just passed forbidding any person to keep in the village over 5 colonies of bees. Penalty, \$1.00 to \$3.00 per colony each month. How is that for an ordinance? Case No. 3 so far this season.

Sixty-five percent of Wisconsin bees, last fall count, are now dead. Clover and basswood promise good. N. E. FRANCE.

Geo. W. Brodbeck, of Los Angeles Co., Calif., Secretary of the National Bee-Keepers' Association, writing us May 24, had this to say:

"There will be no honey to speak of produced this season in Southern California, and, furthermore, it now looks as if it will prove the most disastrous year we have ever had, for the bees in the honey localities are not securing enough nectar to live on."

We regret to learn that Mr. Brodbeck has not yet fully recovered from his long siege of sickness, which we referred to in these columns some time ago. We trust he may soon be all right again, for it falls upon him, as secretary of the National, to prepare the program for the St. Louis convention, and that is no small duty.

The York Honey Company is the latest thing in the field of handling and bottling honey, located at 101 E. Kinzie St., here in Chicago. Mr. Henry M. Arnd is the manager of the Company, and the writer is its president. It is unincorporated. The new Company will use on its output of honey the registered label bearing the well-known name, "York's Honey," which, through our efforts for many years, has become a popular brand in Chicago, and even far beyond the borders of this great city.

The office of the American Bee Journal will still be here at 334 Dearborn St., where we have a lease for three years. It is not now our intention to devote any time to the new company which bears our name, further than to assist Mr. Arnd in the buying of stock necessary to run the business, which consists exclusively of honey and beeswax.

Mrs. L. Harrison, so well known to our readers, passed away at St. Andrew, Fla., May 26, 1904. Mrs. Harrison was one of the old-time correspondents of the American Bee Journal, and lately has appeared among those who furnish expert opinions on questions referred to a list of about 25 prominent bee-keepers. For some years she has been spending the winters in Florida, her home being in Peoria, Ill. When sending us a notice of her departure, Mr. Harrison said that she died after a severe illness of six weeks duration. She had been nearly blind all winter from cataract, and had been a great sufferer, so that death came as a sweet release.

We are sure our readers will join with us in extending to Mr. Harrison sincerest sympathy in his bereavement.

We will publish a portrait and biographical sketch of Mrs. Harrison a little later.

C. W. Virgin and Mrs. Berthe.—We have heard from another of Mrs. Berthe's many admirers, who evidently is jealous of her reputation. On page 372 we had a few very proper things to say regarding her appointment as superintendent of the apiarian department of the St. Louis Exposition. After reading these remarks, her "Virgin" friend sent us a postal card with the following, which we reproduce as nearly as possible in type, as it was written:

G. W. York:—I suppose if you had been consulted it would have been all right—but now Mrs. Berthe has been appointed and you new nothing about it are sore. Oh yes, we understand there is no personal feeling in the matter, ha-ha. To bad. I feel sorry for you.

C. W. Virgin.

Lest there may be a very few others who are as far from the truth as is Mr. Virgin, and who harbor in their hearts wrong thoughts of

us, we wish to say that we did not expect to be consulted in the matter of the appointment received by Mrs. Berthe; nor could we possibly have accepted the position had it been tendered to us. So the only "soreness" or "personal feeling" there is must exist wholly in Mr. Virgin's imagination. There isn't a bit of either in us about Mrs. Berthe's appointment.

Now, the proper thing for Mr. Virgin to do is to send us at least two gentlemanly apologies. One for writing at all as he did, and the other for putting it on a postal card. In rather sharp contrast is the following taken from a letter that came in the same mail that brought Mr. Virgin's card:

"Your editorial reply on the Mrs. Berthe matter on page 372 is fine. Say, wouldn't you have rather a lively time of it if you were expected to go up to Minnesota, down to Florida, and to all other places between, before you dared to say you had never heard of a certain bee-keeper?"

Sketches of Beedomites

C. THEILMANN.

On May 26 we received the following concerning the death of our old friend, C. Theilmann, of Wabasha Co., Minn.:

DEAR MR. YORK:—I here send you the sad news of father's death. Our parents are both dead now, and our home is very empty, as you may well know. Two brothers and one sister are married; one brother and myself are, or were, at home with our parents.

Father passed from earth to the Better Land on May 30, after being confined to his room and bed for three weeks, with urinary and bladder trouble, combined with heart failure, which had troubled him more or less for many years, although he could always attend to his bees, of which work he was very fond.

A year ago in April mother died, since which time father's sickness became gradually worse, so that he often wished that death would but release him. He was up and around, and could look after his bees, until three weeks before his death, when he was taken sick.

Father was born in Germany, and came to America in 1854. He married Angola Schocke, Nov. 13, 1856, and settled on their homestead in the spring of 1857, where they stayed until death called them home. Five children were born to them, three boys and two girls, all of whom survive.

Father was a model bee-keeper, and had been in the business for many years.

Yours respectfully,

MISS MARY THEILMANN.

We were sorry to learn of the death of Mr. Theilmann. We felt that we knew him quite well, as we met him a number of times when he came to Chicago. He was indeed a sturdy German, conscientious, and of high moral character. Our sympathy is extended to the bereaved children who are left to mourn the loss of faithful and devoted parents.

The following biographical sketch of Mr. Theilmann appeared in the American Bee Journal for Feb. 17, 1898, but it is just as interesting now as then, and shows what Mr. T. had done in bee-keeping as well as in other lines of usefulness:

The subject of this sketch was born June 6, 1833, in Kieselbronn, near Pforzheim, in Baden, Germany. His ancestors escaped the massacre of what is called "The Cruel Bartoloma Night in France," and found safety across the river Rhine, in Baden.

Mr. Theilmann attended common school from his 6th to his 14th year, besides one winter term in his 20th year, in a drawing school at Pforzheim; otherwise he stayed at home and helped his father to work his land until he came to America. He landed in New York in April, 1854, after a voyage of 42 days. He rambed for two years, going to Albany and Buffalo, N. Y.; Cleveland, Columbus, and Cincinnati, Ohio; Louisville, Ky.; Memphis, Tenn.; and to New Orleans, La., where he worked on a sugar plantation, got sick, and nearly died with yellow fever; when recovered he went to Shreveport, La., Pittsburg, Pa., then to St. Louis, Kansas City, and Council Bluffs, and back to St. Louis, Mo. In June, 1856, he started for Minnesota, and took up a government claim in Wabasha County, on which he still lives. During all his rambles he earned enough to make his living and pay his way, as he had given nearly all the money he brought with him from Germany to a distressed friend, when he landed at New York.

In the fall of 1856 he was married in St. Louis, and took his wife to his new home in the wilderness, among the Sioux Indians, wolves and rattlesnakes, though they have never done any harm to them. A cat, that came to them, was the first domestic animal they possessed for many months. Speckled trout in the creek were plentiful, as the Indians would not eat them.

The first year Mr. T. had to carry his provisions on his back from Wabasha (13 miles), making the round trip in a day, sometimes without his dinner.

In 1857 he hired four yoke of oxen and a 24-inch breaking plow of some of his nearest neighbors three miles away, and broke up the first six acres of his claim in two days, *all alone*; and paid for the outfit with 17 days of 14 hours each, or 50 cents a day, mowing grass for hay by hand. The boys and young men of to-day would say, "I wouldn't do that;" but many of them would get along far better if they would.

Mr. Theilmann kept on working and improving his claim, and after awhile bought a cow and a yoke of oxen. Boys and girls were born, until there were five in the family. They grew up rapidly, and soon helped their father and mother. The country settled up rapidly, a school district was formed, and school was held in a primitive log house first.

In 1860 the Indians disappeared, just a little while before the New Ulm massacre, and never came back. In 1863, Mr. T. raised over 1100 bushels of wheat on 25 acres of land, of which 200 bushels were sold out of his granary for \$500; he has also had wheat in succession for 17 years on a 16-acre piece, and never had less than 25 bushels per acre, and up to 45 bushels without the least fertilizing.

In 1869 Mr. T. found a bee-tree in his woods, and took it home; from this and two more swarms he found he started his bee-keeping, transferred them to frame hives, Italianized and increased them to 74 colonies. In 1871 he lost all but 4 colonies, but by May, 1872, he hunted and found 15 colonies in trees and rocks in his vicinity; this gave him a start again. For nine years after this he tried all kinds of wintering methods without satisfaction, until in 1882 he built a bee-cellar all underground, which stood the test, and since then his losses have been very light in wintering, and they have averaged him an income of about \$1000 a year.

On Jan. 25, 1885, one of his bee-repositories, in which 87 colonies were wintering, burned down, but fortunately he had 100 colonies in two other bee-cellars. He started the season of 1885 with 90 colonies, which he increased to 170, and produced 6500 pounds of very fine honey, which sold for from 15 to 20 cents per pound.

The season of 1889 was the best with him, 185 colonies, spring count, producing 25,000 pounds of comb honey. His honey crop and bees sold that year amounted to about \$2500. The best from one colony and its increase he ever got in one season was five good swarms and 600 pounds of honey; this was in 1872.

A car-load of the honey crop of 1896 was sent a Chicago commission man, who has tried to swindle him out of it for the past 18 months; it is still in court.

The season of 1897 was almost a total failure, getting 1700 pounds of honey from over 200 colonies.

In 1877 a railroad was built from Wabasha to Zumbrota, with a station on Mr. Theilmann's land. Mr. T. saw the opportunity, and laid out a village, calling it Theilmanton; it is now a village of about 100 inhabitants, with nearly all the conveniences farmers generally need, and it is quite a big shipping point for grain and stock. Mr. T. also built a warehouse and grain elevator, which is the handiest and most substantial building on that line of the road. It works wholly automatically, without machinery of any kind, from the farmer's load to the cars. The grain can be weighed going in, also going out, without shoveling or other hand work except moving a light lever. Mr. Theilmann planned it himself, and prepared the drawings for it. The warehouse and the station agency were run by him for five years, when he sold it and went West on a trip to California and Oregon, and he got interested in medical lakes and healing mineral waters in Washington, 16 miles west of Spokane Falls; also in general mercantile at the Lake. He was the first bee-keeper that took two colonies of bees from Walla Walla across the Snake River as far north as Medical Lake. The bees were left in care of his oldest son, George; they did fairly well for five years, or until Mr. T. sold out there.

In the meantime the farm and bee-culture were carried on at the old homestead, and Mr. Theilmann is satisfied and contented that he can not find a better place in the Union for his taste than what he has, especially after seeing Texas and some other Southern States three years ago.

Mr. Theilmann's farm now consists of over 700 acres of land, some of it rather rough, but good pasture for his bees, cattle, swine, and fine-bred French Percheron horses; with substantial buildings for all of them, also a good house for himself, wife, and two children, a boy and a girl. Two sons and one daughter are married, and have homes of their own.

Mr. Theilmann learned enough in the drawing school to make his own plans and drawings for many structures he has built on his own land, and otherwise, to almost perfection in handiness, work-saving, durability and comfort. He has also caused a nice little church to be built at Theilmanton, in which to worship and give thanks to the Giver of all good things for what we receive from his Fatherly hand.

A FRIEND.

Honey as a Health-Food is the name of a 16-page leaflet (3½x6 inches) which is designed to help increase the demand and sale of honey. The first part is devoted to a consideration of "Honey as Food," written by Dr. C. C. Miller. The last part contains "Honey-Cooking Recipes" and "Remedies Using Honey." It should be widely circulated by every one who has honey for sale. It is almost certain to make good customers for honey. We know, for we have used it ourselves.

PRICES, prepaid—Sample copy free; 10 for 20 cts.; 25 for 40 cts.; 50 for 70 cts.; 100 for \$1.25; 250 for \$2.25; 500 for \$4.00; 1000 for \$7.50. Your business card printed free at the bottom of the front page, on all orders for 100 or more copies. Send all orders to the Bee Journal office.

Contributed Articles

Putting Foundation into Sections.

BY WM. MUTH-RASMUSSEN.

ON page 313, "Ohio" asks how to put foundation in sections so that it will stay. Dr. Miller's answer does not seem, to me, quite to fill the bill. Perhaps I can help "Ohio" by giving my way of doing it.

I use full sheets and put them in with a Daisy foundation fastener, which is of the old style, where the front part extends about $3\frac{1}{2}$ inches above the block, against which the foundation rests, and is shaped as an arch or half circle. (According to pictures in late catalogs, this arch top is cut away, down to the block.) I gouge a finger-hole (similar to the hand-hole in the end of a shipping-case) in the arched top, running from within $\frac{1}{2}$ inch of the top of the arch and down to the block. The hole is one inch wide and $\frac{5}{8}$ inch deep.

Now, as soon as the foundation drops from the hot steel plate to the wood of the section, I reach in through the finger-hole with the middle finger of the left hand, and bend the finger under the bottom (now upper part) of the section. Then, with the point of the thumb on the opposite (front) side I remove the section from the fastener, the foundation being firmly supported between the thumb and finger. While still holding the section in this position (upside down), I grasp the foundation with the thumb and middle finger of the right hand and give it a light pull towards the wood at two places, namely, opposite the ends of the insets in the section. This thickens the wax at the line of attachment, so that it spreads a little to both sides on the wood. As soon as this is done, I turn the section over and set it aside. It will not do to pull at the middle of the line of attachment, as this has a tendency to twist the foundation.

If the foundation does not melt quickly enough to suit me, as sometimes happens in cool weather, or when the foundation is damp (I make my own), I place the edge of the nail on the index finger of the left hand against the foundation and bear downward, so that the foundation will press on the hot plate with more than its own weight. This accelerates the melting.

Care must be taken that the foundation does not swing, while the attachment is still warm. Swinging stretches and thins, and therefore weakens, the attachment. A slight vibration of the loose (lower) end of the sheet does no harm, but there must positively be no motion where the foundation joins the wood.

I think this will make it secure enough to move on a wagon without break-down; but if it should not be found sufficient, let "Ohio" try the following in addition to the preceding: Just before putting the foundation on the hot plate, bend the foundation a little, so that the attachment will be on a curve instead of a straight line. If otherwise rightly done, this will effectually prevent the foundation from swinging, and nothing but a heavy jar will break it loose.

Inyo Co., Calif.

Formaldehyde Alone Not a Disinfectant.

BY J. E. JOHNSON.

ON page 249, Mr. Hasty says that I am giving the readers of the American Bee Journal some well-ripened nonsense in advocating the use of oxygen as well as formaldehyde in killing germs and spores of foul brood. It would certainly be valuable information if Mr. Hasty would explain why. Also, how any gas affects the life of germs and spores.

All bacteria are vegetable, not animal, and do not live from compounds as do animals, and are not affected by any treatment as is animal life. These organisms are composed of protoplasm, paraplasm, etc., incased in a membrane of such resisting qualities that the life of the organism is safe from gas treatment. Oxygen of itself is a bactericide, and any germ is destroyed by oxygen alone if the cell-membrane is ruptured. Different acids have the power to rupture or eat through that cell, as it were, and for that reason they are bactericides. The gas of itself does not affect germs,

because it can not penetrate the cell-membrane. Air itself is very penetrating, and would kill the life of the germ only for that membrane.

Formaldehyde is fully conceded to be the most effectual gas disinfectant known to medical science, that is, for all vegetable germs. But, why? I won't ask the readers to take my word for it alone, but Prof. George Newman, M. D., F. R. S., Demonstrator of Bacteriology in King's College, London, who is probably as good authority as can be found on this subject, says in his excellent work on bacteria, that whether formaldehyde is used in the form of formalin or paraform, it is effective because in the air it oxidizes into formic acid, hence it is effective. Other high authority corroborates this, but to get further evidence I wrote Prof. Hopkins, chief in chemistry in the Agricultural College at Urbana, Ill., and the following are his words in reply:

"Replying to your favor of April 6, I beg to say that oxygen is *absolutely* necessary to the changing of formaldehyde into formic acid."

He also says that experiments conducted by Prof. Burdill have shown that formaldehyde is not effective without moisture.

Now, if formic acid is the real cause of disinfection, and formaldehyde is only one of the elements consumed in forming this acid, is it not just as necessary to have the one element as the other? Not only so, but the oxygen can not possibly unite with any other element to produce any other product without expense to itself, so it certainly is just as necessary to have a constant incoming of fresh oxygen into a tank as it is to have a continual flow of gas.

Furthermore, formaldehyde gas is all gas, but air is only 1-5 oxygen, so the percent of oxygen in an air-tight tank would be small indeed. Now we know it is a hard matter to get any tank entirely air-tight, but if a tank is left open at the top, letting in gas at the bottom until gas comes out strong at the top, then closing air-tight, how much oxygen have you in the tank? Only 1-5 of the air in the tank being oxygen, and with a constant flow of gas in, or trying to get in, you would prevent more air from coming in. I say, and I'll stay by it until shown differently, that the principal reason people have not been successful in disinfecting hives and combs is simply because they have thought formaldehyde a disinfectant of itself, which it is not, and they have failed to let in the other agent—oxygen—in sufficient proportion to get best results.

I think that if cotton was soaked in formalin and placed in an empty hive-body, then three or four hive-bodies of infected combs placed above, then a cover placed on top so that all would be tight excepting little cracks between each body, it would be effective; but I want also to emphasize that combs must be *moist* and *warm*, and in order to penetrate into the wax or cocoon of wax or cell, give it *time*.

I talked with a very celebrated physician a few days ago, who has had many cases of smallpox, diphtheria and scarlet fever, and I asked him if he used formalin in disinfecting rooms. He answered, "Always." I asked how he used it. He preferred merely to saturate a sheet in formalin and hang in the room, and close the doors, etc., and not once has he failed to get good results. We well know that any dwelling-room will let in plenty of air, and yet thousands of such rooms are disinfected, and very seldom any failure.

Yes, it certainly is nonsense to say a tank must be air-tight in order to disinfect with any gas, as sulphurous gas—the second best disinfectant—is effective because it unites with the moisture of the air and produces sulphurous acid, and thus disinfects. The only reason that formalin may not be effective is because spores may be imbedded in wax. But when we take into consideration that both air and gas will penetrate very solid substances, if given time, I think it very probable that where any germ can live, both the gas and oxygen will reach them if given time.

If it is not presuming too much I want to make a few suggestions. I have given in former articles evidences that it is reasonable to expect that formaldehyde may be applied strong enough in a hive of live bees to kill germs of disease and not injure the bees. Let us take a reasonably strong colony of bees in the spring, but somewhat affected with foul brood. If a good honey-flow is at hand, and the weather is nice and warm, what is the result? In a few weeks the disease has almost disappeared of itself. In fact, many bee-keepers who have foul brood among their bees know that a pretty strong colony, although diseased to a considerable extent, will almost cure themselves of the disease, but the undeveloped spores are there, and the disease will reappear when conditions become more favorable to the growth of disease. Why is this? I think this is simply be-

cause the bees produce a *very much* greater amount of formic acid at this time.

Honey contains a certain amount of formic acid which gives it its keeping quality. Bee-sting poison contains formic acid, although the toxin is the element that gives pain and causes swelling. The acid causes the itching and irritation. Now, we know beyond a doubt that one of the products of the bees is formic acid. We also have good reason to believe that bees produce much more of this acid in a good honey-flow than they do when honey is not coming in. Whether the bee produces formic acid any other way, excepting by the way of the poison-sac, I do not know, but I think that during the process of evaporation the formic acid is conducted in the form of vapor, or rather minute particles, and is absorbed by the honey. Now, if at such a time they are able almost to cure the disease, why could we not enable them to make a complete cure by supplying them with mild fumes of formaldehyde, thus giving more acid and enabling an antiseptic to become a disinfectant?

Our great physicians have been able to acquire much knowledge of the human system, and still all they can do in case of sickness is to aid Nature to overcome the disease, and so it should be with bees. First, find out what power the bees themselves have in overcoming disease, then increase that power, if it be possible. We have within our system a means of fighting disease. The phagocytes of the blood, which are white cells, are so small that 50,000 would balance on a pin-head, and still when a minute drop of blood is placed on the slip of a compound microscope these phagocytes can be plainly seen to devour germs like a dog eating meat. If you prick your finger with a pin, in an instant many germs will try to enter the wound, but just as quickly thousands of phagocytes rush to the spot and not only destroy the germs, but wall them out. We call that wall "a scab" if it is large enough. If these scavengers of the human system would fail to do their proper work, then no medical skill could benefit us.

I want to say right here, that I heartily agree with Mr. A. C. Miller when he urges us to learn the nature of the bee; then we will be better able to give them proper care. Mr. Miller has met with criticism on every corner because he is so far ahead in his study of Nature. Many older bee-keepers would do well to ask him for information, instead of saying, "Taint so."

Any new idea or bit of information, not generally known, must run the gauntlet, and usually is ridiculed and shoved aside, unless brought out by some well-known writers of long standing. We all have ample room for improvement, and often the rejected stone becomes the corner of the foundation, or at least finds a place where it comes in pretty handy.

Knox Co., Ill.

Some Old Apiarian Ideas Changing.

BY ROBT. WEST.

EDITOR YORK:—Your generous administration of bee-knowledge, sometimes in double doses, has not, by me at least, been very gratefully responded to; for since I became able to be about again, so many things had to be attended to at once that I did not dare to "open the bottles," lest being attracted by "the smell of knowledge," I might spend my time drinking when I should be working. Everything in its proper time. Now the drouth has begun, the honey-flow seems over, and I am opening the wrappers of the "Old Reliable."

POLYGAMOUS NOTIONS OF QUEENS.

The polygamous notion of the queen is rather a startler to us queen-breeders. And why should she not, like other females, indulge more than once? Will this account for some queens giving fair progeny at one time, and inferior at another? Clipping her wing would prevent her going out after she began to lay.

What about such an unaccountable variety in drones? Who knows that the sperm in the spermatheca of the queen does not affect her whole system? We now have at this Station, at the head of one of our best working colonies, a golden queen whose drones we would like to use, but, like her workers, they are half black—every one. How does this come when she is well-bred and such a beauty?—only she fell in love with a negro!

It is beyond the present power of the microscopists, but will the physiologists gather up such phenomena, and, with fresh data, reason it out once more, and let us know the result?

CHANGING DRONE-CELLS INTO QUEEN-CELLS.

Yes, we, too, found a beautiful queen-cell built in the midst of drone-comb by attraction? So nice that we transferred it to a nucleus when sealed, chalking it so as to note results; but chalk did not stand Jamaica rain, and we lost track of it. Why should we quarrel with the bees if they want to turn a drone-cell into a queen-cell? Does not their queen often lay drone-eggs in worker-cells, and sometimes worker-eggs in drone-cells?

One of my neighbors says he used strips of drone-comb on the bottom of horizontal bars for his queens to lay eggs in for queen-cells. May be he does, but we do not believe all that is said in this country, for moral perception is not a noticeable feature of the inhabitants. Even one of the wholesale grocers assured me one day that Ananias and Sapphira were not Jews, but Jamaicans!

DO DRONES EVER GATHER NECTAR?

I see a question on page 212, to which I answer, Yes. Last summer, at this Station, I saw a drone sucking nectar from an unsealed comb in my hand. Lest I was mistaken, I called one of the students to look closely, and see if he was feeding. He exclaimed, "Yes, his tongue is right into the honey." Although an old man, I had to turn a somersault right before my class, to which I had been teaching that only the young workers had *all* the glands for secreting the digestive juices in proper working order; that even in the older workers some of them were shrunken, ill-shaped, discolored, and unfit for digestive duty. When this occurred these went out to gather stores, while their younger sisters fed the colony on semi-digested food.

Maeterlinck was a close observer, and he states in his book that the drones on returning from their daily flight help themselves to the choicest nectar in the cells. But even this, of course, has had some of the juices from the organs of the gatherer, and perhaps also the one that carried it to the storage-cell.

Do not be so surprised, for "knowledge is increasing." You are helping it onward. Many of the old ideas must go. Hope Gardens Experiment Station, Jamaica, May 12.

Convention Proceedings

Report of the Onondaga Co., N. Y.) Convention.

(Continued from page 392.)

FIRST DAY—AFTERNOON SESSION.

The first feature of the afternoon session was the reception of new members. Then Mr. S. D. House, of Onondaga County, delivered the

PRESIDENT'S ANNUAL ADDRESS.

The subject of "organization," while it is a broad and seemingly easy question, I feel that I am incompetent to do anything like justice in discussing it. When we look around us we find organization everywhere, from the administration of our governmental affairs down to the smallest business concern; in fact, every well-regulated and successful business enterprise would fail without being properly organized for conducting its affairs. What would labor do in these times without organization in combating with organized capital?

Self-preservation is the first law of Nature; organization is the first adjunct to self-preservation. The great enterprises of to-day, that are so astounding in their magnitude, are but the results of the associated effort, that are destined to revolutionize the business operations of the world. Association and unity of action are the great main-springs of power and progress. We have seen what wonderful results have been accomplished by associated action and combination of interest. We have seen what wonderful results have been accomplished by the associated dairy-men; what organization has done for the farmers with their strongly organized granges; what it has accomplished for the fruit-grower, and what it is doing for almost every conceivable branch of industry.

But how about our own avocation, "Apiculture?" One of the best illustrations of co-operative effort is plainly

shown in the economy of the hive. A single bee of itself is powerless to accomplish a very large amount of labor however industrious it may be. But when assisted by the vast throng of workers composing a colony, we well know the results of their united efforts, both in storing honey and in the defense of the hive.

We, as a fraternity of bee-keepers, can learn useful lessons from our bees. To them, not a few of us, look for the necessities of life, procured by the sale of delicious honey, the result of the persistent labor of the thousands of tiny insects banded together in one common cause. If the instinct of the bee teaches it, that "In union there is strength," may not we who are endowed by an all-wise Creator, with reason to govern our actions, profit by the example set forth by the busy bees? It was an organization that placed upon our statute books the law prohibiting the adulteration of our products. It was organization that gave us the law protecting our apiaries from the spread of that dread disease, "foul brood." It was organization that kept Cuban honey from entering our markets free of duty. It was organization that gave us the privilege of sending queens through the mails. It was organization that defended several actions which have been carried to a court of record, and establishing facts which gave us a precedent to defend similar actions. It was organization that gave us a law prohibiting spraying fruit-trees when in bloom. In fact, organization is a protection to our industry. That famous old organization, the "Northeastern Bee-Keepers' Association," did us a good work, and it is for us to keep up the good work and place apiculture well up in the ranks among other pursuits.

There are several very important questions that require organized action, if we desire to obtain the best possible results for our labor. First among these is the all-important question of "Statistics." Many bee-keepers sell their products below market value because they have no knowledge of the amount of honey produced in the territory that usually supplies the market they are desirous of selling in. Neither do they know the amount that will be produced in the districts that supply the surrounding markets. Did they know that some sections would produce a large yield, or over-production, and other localities a small yield, or not enough to supply home markets, they could take advantage of the situation, and thereby not only prevent and avoid ruinous prices, but maintain nearly equal values, and a fair remuneration for our labor. This is not only applicable to our own State, but would be beneficial throughout the whole country.

By proper organization accurate statistics can be obtained and placed in the hands of every bee-keeper before, or by the time, his honey is ready to be marketed. And all of us will be benefited thereby. The manufacturer of cotton goods knows what amount of cotton will be produced long before the crop is picked and ready for market, and makes the price accordingly; the same may be said of wheat and corn. We all know what the crop will be before harvested, and the price is established correspondingly. Of course, these statistics are obtained and given out by the Commissioner of Agriculture. But without organization he would be unable to obtain that valuable information. Can you imagine the disastrous results to the wheat, corn and cotton grower without these facts?

Organization is essential in maintaining uniform packages, and uniformity in grading our products; and would be beneficial in many other ways, and keep us abreast of the times by an interchange of views.

As I have said, this subject is a broad one, but I hope I have said enough to provoke a thorough discussion of the question, which will not only result in action, but will bring out those members of the older and sister associations, whose wisdom and advice would be of great value.

S. D. HOUSE.

N. E. France—This matter of organization is one of the utmost importance. The motto, "United we stand," is what we must carry to the front.

Mr. France thought the membership rating extremely low. One dollar would make one a member of the County Association, the State Association, and the National Association. He said that New York was the banner State for membership in the National Association, until at the Los Angeles convention last year when California took its place; but it is coming to the front again. He thought that more ladies should attend the conventions, and that they should be made members of the local association free, collecting only 50 cents to pay their fees in the National. He

spoke of legislation for bee-keepers; said that a great deal had been accomplished along this line. Ohio is now working hard for a foul brood law. In Wisconsin it seemed a hopeless case, but they now have an efficient law, and Inspector France has the disease so well quarantined that in the spring he can go and treat it all. Through being manager of the National Association has come to him the trials and troubles of individual members. Many seem to think they are insured, that no matter what trouble they get into, the Association must help them out. He gave instances in which he had compromised a settlement.

On the subject of adulterated honey, Mr. France said that in some States we only need to enforce the laws we have. As in the case of New York, the Wiley lie is being revived; "an experienced man" had been manufacturing comb honey for seven years. Mr. France had been able to hush him up in the public press, but he had had the first say, and the harm was done.

W. J. Morgan said he was a firm believer in organization.

W. F. Marks—Organization by counties gives a working force in each county. For example, while the foul brood law in New York was under discussion, a county secretary wrote to his member and secured his support, whereas a letter from the State Secretary to county members might not carry the idea of individual responsibility.

Mr. House—We can not maintain prices without thorough organization.

Mr. Marks—We would also gather crop reports.

Mr. France expressed the opinion that more personal good would be received in similar organizations because more bee-men would attend them. Having local organizations also facilitates equal distribution of honey, and helps control the small producers.

Mr. House regretted that local bee-men took so little interest in conventions.

Mr. France—This State has 22,000 bee-men, and yet there are only a few here, comparatively speaking.

A member asked Mr. France how to get rid of skunks in apiaries, whereat an interesting discussion followed. Mr. France related some lively experiences he had with the little fellows as a trapper and trapper's son. He considers them a benefit in the apiary, to get rid of black ants, unless Mr. Skunk becomes depraved and takes to eating bees, when off comes his head!

BEST RACE OF BEES.

"What is the best race of bees?"

Mr. Hutchinson—Italians are slow to go into the supers, and they cap honey more watery. Black bees cap white, but when the second crop of red clover comes the extra tongue-reach of the Italians gives them an advantage, and they will store honey when the blacks are getting nothing. The Carniolans breed up rapidly in spring, but they are no more gentle than the other races, and swarm much more.

Mr. Holtermann—This is a most important question, but hard to answer. There is as much difference in races of bees as in other stock. We are making progress in bee-keeping, and must look at the real value of bees.

Mr. Holtermann thought it would be a good idea to have bee-tests in the same way that dairy tests are held. Government experimentalists should test the powers of different breeds of bees, as to the weight of load they could carry, power of enduring cold, rate of flight, etc. The Carniolans are good, but they swarm too much.

Morley Pettit said that he had had some experience with Carniolans. They cap very white, and they swarm like flies. He prefers Italians with a dash of Carniolan blood.

Mr. House—A Carniolan drone mated with an Italian queen gives best results.

Mr. Holtermann had noticed Italians storing honey at the close of the season when the blacks were getting nothing.

Mr. West finds the swarming propensity of Carniolans great. He told of a place where he went to inspect bees. The man of the house was away, and he had to help hive 20 swarms that day. He left at 4 o'clock, and the bees were still swarming.

H. S. Ferry—Give them plenty of room, and they will not swarm.

The Carniolans had brought in more honey than any other for Mr. Ferry.

Mr. Holtermann considered it important to have several colonies of Carniolans in the yard to help build up weak colonies in the spring, because they rear brood so rapidly.

(Concluded next week.)

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

Clipping Queens and Swarming Out.

MY DEAR MISS WILSON:—I must write and tell you how I think I almost ruined my apiary by clipping my queens. I have had such success with the few I have clipped in other years that I decided this spring to clip all I could find. And so one warm day during early fruit-bloom I did it. But I think I made one mistake. To make it doubly sure, I clipped *both* wings instead of one. I did not think of any harm coming from it, and I was especially careful to hold the queen gently as near the head as possible.

Since then I have discovered three of my queens hopping around the ground. Several others are missing from their hives, and one persists in swarming out. They act as if they are completely demoralized. I have heard that cutting off the antennæ will render a queen useless, but I never heard that depriving her of her wings would have that effect. Well, to say the least, I am surprised at the results of my clipping, and I think after this I will let the queens most severely alone.

ILLINOIS.

I don't believe that clipping your queens' wings was the cause of their swarming out. You would probably have had the same experience if they had had one wing left on, or if they had not been clipped at all. However, clipping the wings on one side is all that is necessary to make everything perfectly sure. Indeed, unless cut pretty short a queen can make a better attempt at flying with wings cut on both sides than with them cut on only one side. Just try it with a hen, and see if she will not fly better with both wings cut than she will if only one is cut. If one wing is entire she will flop over on her side if she attempts to fly.

The swarming out was either because your colonies were weak, or without food.

There has been a good deal of trouble with bees swarming out this spring, no doubt on account of the severe winter and spring.

One remedy is to put a queen-excluder under the hive and thus fasten the queen in until she makes up her mind to stay.

Bees Cause Matrimonial Troubles.

AMERICAN BEE JOURNAL.—

We are taking the liberty of sending you the enclosed which we received from Mr. W. D. Soper—one of our wholesale customers. He states in a letter that Mrs. Ward is an old customer of his.

We have not consulted Mr. Soper or Mrs. Ward about sending this to you, but think there can be no objection. As this is a little out of the ordinary line of bee-news, we thought it might possibly be of interest.

Very truly yours,

LEWIS C. & A. G. WOODMAN.

The letter referred to in the above reads as follows:

CALHOUN CO., MICH., May 16, 1904.

MR. W. D. SOPER.—

Dear Sir:—I wish you would come and get my bees, and everything belonging to them, right away, or at least write and tell me what you will do about them. If you can not give me anything for them, why, take them just the same. I will send stamp. Please write immediately.

Respectfully,

SARAH S. WARD.

The local newspaper had the following account of this unfortunate affair:

BEE-WOMAN DID NOT DISPOSE OF STOCK, SO HER HUSBAND LEFT HER—LATTER HAD MADE A PROVISIO THAT THE BEES MUST GO.

"May 17.—Mrs. Ward, the bee-woman, is again left alone, her husband having taken his departure unexpectedly, leaving his clothes and personal effects, for which he will return to-morrow.

"Mrs. Ward is respected and highly esteemed by her many friends and neighbors, who sympathize with her in

her domestic troubles. She is a good woman, kind, gentle, and affectionate, and the only thing that has marred the happiness of her latest marriage has been several colonies of bees. Most of the bees died in the winter, and if they had all winter-killed Mr. Ward would not have had occasion to leave her roof. He said to the representative of this paper repeatedly that either the bees would have to go or he should take adieu of the apiary. Time has dragged along, and the season for bees to swarm is approaching, and the presence of the little buzzing honey-makers fairly haunted him. He saw his wife in the top of a tree sawing down a swarm of bees every time he closed his eyes. He never imagined himself engaged in any such occupation, for he wouldn't have stopped the bees if they had all started to leave, not even if they had taken the hives and bee-house along with them. He had honey three times a day and between meals, and yet he became impatient. Could the bees ever be sold? Could they be given away? Could they be killed? Either they must emigrate or it was his move, and he moved yesterday afternoon. He went to Eaton Rapids, or it is supposed he did. As to whether any of the bees stung him good-bye, it is thought perhaps they did. At any rate, his place at the table is vacant, and his granddaughter accompanied him. Their voices are no longer heard, and the only sound is the buzzing of bees.

"Mrs. Ward is a thrifty business woman, having made money from her bees. She is a neat and tidy house-keeper. She is a very agreeable woman, with a loving disposition. She consented to sell the bees; in fact, that was a condition upon which Mr. Ward promised to take her for better or for worse. The bee-market seems to be responsible for breaking up the home, as the bees didn't sell, and Mr. Ward lost confidence in futures. He got so he couldn't sleep. Something had to be done, and he concluded that it was "up to him" to act. He postponed that event for days, but yesterday afternoon he began to pack. His goods were nailed up in boxes and tied up in bundles, and when it was done he cast a look of infinite loathing toward the bee-hives, a glance of sadness toward Mrs. Ward, and taking his granddaughter by the hand, he walked away, accelerating his pace as the thought dawned upon him that he would never again live at an apiary.

"Poor Mrs. Ward, the bee-woman, was almost overcome with sadness, for life during the last few months had been a very happy one. She has reached an age when most old people are feeble, and she is not so spry as she used to be, but she faces the future with hope and courage."

Here is a sister that is in trouble on account of divided affections. It seems that when she was taken for better or worse the bees were not included, and the contract was that the bees must go. As she failed to keep her part of the contract, he evidently did not feel called upon to keep his. However, she seems anxious now to do her best, as she is willing even to give them away to get rid of them, for honey three times a day and between meals failed to reconcile him.

We may question her wisdom in making such a contract, but having made it she should surely keep it.

This is a warning to any of the sisters who may be contemplating matrimony, to look out for the contracts they make.

P.S.—A clipping received later shows that even if the husband is lost, all is not lost. The law will allow the deserted wife to have half her husband's pension, and the promise to sell her bees doesn't count in law, because not made under oath.

On the whole, this thing of marrying is sometimes rather troublesome, and any of you girls who have not yet made the fatal plunge, may do well to think it over carefully before taking on yourselves the care of a man. Unless you happen on one of just the right kind, he may be more troublesome to manage than a whole lot of bees.

"The Hum of the Bees in the Apple-Tree Bloom" is the name of the finest bee-keeper's song—words by Hon. Eugene Secor and music by Dr. C. C. Miller. This is thought by some to be the best bee-song yet written by Mr. Secor and Dr. Miller. It is, indeed, a "hummer." We can furnish a single copy of it postpaid, for 10 cents, or 3 copies for 25 cents. Or, we will mail a half-dozen copies of it for sending us one new yearly subscription to the American Bee Journal at \$1.00.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Colony Killing Drones—Buckling in Foundation—Dead Bees Lying Around.

I have a colony that is killing off its drones, while the bees in other colonies let them remain, and are working hard. This colony has swarmed twice this season. It appeared to be half drones. Why do they kill them so soon?

2. What makes the bees fly from the hive as if they were angry, return, and then go out again? This colony does this every day or so; it is a strong colony.

3. Why do bees run about on the alighting-board with great haste, at about dusk? They do not fly, neither do they run after each other. Are they queenless?

4. Will "buckling" in super foundation make any trouble if running for extracted honey?

5. I find dead bees on the alighting-board every morning, and a lot of dead ones on the ground in front of the hive. I also notice bees in the weeds and grass all over the apiary. What can I do to remedy this?

TEXAS.

ANSWERS.—1. When a colony has swarmed, and especially after its young queen has been fertilized, it has no further need of drones, and it is nothing strange they should be driven out. Your colony being weakened by swarming twice, would be sure to get rid of its drones.

2. The young bees are probably having a playing spell, flying with their heads toward the hives to mark the location.

3. It looks like queenlessness, but bees run about over the front of the hive a good deal when all right.

4. No great trouble, but of course the straighter the better.

5. Hard to tell a remedy without knowing the cause. Looks a little like a case of poisoning, in which case the only thing is to stop the poisoning—if you can.

Putting On Supers—Reversing Combs—Sticks Instead of Wires.

1. Turn to page 233, where "Missouri" asks if you would put on supers before the brood-chamber is filled; you there answer his question by telling him, "No, not until the brood-chamber is filled and the honey harvest is nearly over." Do you mean that the brood-chamber is filled with brood, or with honey?

2. Now, turn to page 313, where "Wisconsin" tells you that he has cut out all the crooked and drone comb, and sees that all his combs are lacking one inch from the bottom-bar, and wishes to reverse the combs, and wants to know if it will hurt to have the honey down and the brood up, for three or four days. And you tell him that it will not. But, if he was to reverse the frames would the bees not build comb in the opposite way? If not, how would you reverse a hive containing Hoffman frames?

3. On page 330, Virginia asks: When you use sticks instead of wire, why do you make the sticks shorter than the depth of the frame? And you answer his question; but what I want to know is: How do you fasten the sticks in place, and what are their dimensions?

LOUISIANA.

ANSWERS.—1. I am older now than when I wrote that answer, and I think I can give a shade better answer now. So long as there is plenty of room in the brood-chamber you need not expect the bees to do any storing in supers. When the brood-chamber is filled—and it makes no difference whether it is filled with brood or honey—then if they have anything to store they must store it in the super. But it is better to have supers on a little before they seem to be actually needed. If a super is not given until the bees are actually crowded for room in the brood-chamber, it may set them to thinking of swarming; and at any rate they must have a little time to get acquainted with the super before actually beginning work in it. They will begin work in the first super generally more prompt if a bait-section be in the super—a section containing comb at least partly drawn out.

2. Examine a brood-comb, and you will find that at the upper part, where the cells are quite deep for storing honey, they are built with a very decided dip, while the cells that are used for brood-rearing, and only 7-16 deep, have so little dip that if a piece of the comb were cut out you could hardly tell which was up or down. In actual experience I have found, as have many others, that the bees rear brood in these brood-cells all right when they are upside-down.

3. A full and satisfactory answer to this question can most easily be given by the following extract from the book, "Forty Years Among the Bees:"

GETTING COMBS BUILT DOWN TO BOTTOM-BARS.

While upon the subject of frames, I may as well tell how I manage to have them entirely filled with straight combs which are built out to the end-bars and clear down to the bottom-bars, a thing I experimented upon for a long time before reaching success. The foundation is cut so as to make a close fit in length, and the width is about half an inch more than the inside depth of the frame. The frame is all

complete except that one of the two pieces of the bottom-bar is not yet nailed on. The frame is laid on a board of the usual kind, which fits inside the frame and stops on the edges so that when foundation is laid on the board it will lie centrally in the frame. The half of the bottom-bar that is nailed on lies on the under side. The foundation is put in place, and one edge is crowded into the saw-kerf in the top-bar. Then the lacking half of the bottom-bar is put in place, and a light nail at the middle is driven down through both parts. Then the frame is raised and the ends of the two halves of the bottom-bar are squeezed together so as to pinch the foundation, and nailed there. Then the usual wedge is wedged into the fine saw-kerf in the top-bar.

FOUNDATION SPLINTS.

Now we are ready for the important part. Little sticks or splints about 1-16 of an inch square, and about $\frac{1}{4}$ inch shorter than the inside depth of the frame, are thrown into a square shallow tin pan that contains hot beeswax. They will froth up because of the moisture frying out of them. When the frothing ceases, and the splints are saturated with wax, then they are ready for use. The frame of foundation is laid on the board as before; with a pair of plyers a splint is lifted out of the wax (kept just hot enough over a gasoline stove), and placed upon the foundation so that the splint shall be perpendicular when the frame is hung in the hive. As fast as the splint is laid in place, an assistant immediately presses it down into the foundation with the wetted edge of a board. About $1\frac{1}{2}$ inches from each end-bar is placed a splint, and between these two splints three others at equal distances (Fig. 31). When these are built out they make beautiful combs, and the splints do not seem to be at all in the way. (Fig. 32).

A little experience will enable one to judge, when putting in the splints, how hot to keep the wax. If too hot there will be too light a coating of wax.

It must not be understood that the mere use of these splint will under any and all circumstances result in faultless combs built securely down to the bottom-bar. It seems to be the natural thing for bees to leave a free passage under the comb, no matter whether the thing that comes next below the comb be the floor-board of the hive or the bottom-bar of the frame. So if a frame be given when little storing is going on, the bees will deliberately dig away the foundation at the bottom; and even if it has been built down but the cells not very fully drawn out, they will do more or less at gnawing a passage. To make a success, the frames should be given at a time when work shall go on uninterruptedly until full-depth cells reach the bottom-bar.

Short Method of Transferring Bees.

In "A B C to Bee Culture," under "Heddon Short Method of Transferring," it says: "If the old queen in the newhive is a valuable one she should be caged when making the second drive." What does this mean? Should she be kept away from the bees for some time, or just while the bees are entering the hive and then run in at the entrance? Or should she be liberated in the top of the hive?

IOWA.

ANSWER.—There is a possibility that the strange bees introduced may ball and injure the queen; so she should be caged, and left caged, in the hive perhaps a couple of days. There is still a possible danger that the bees finding their queen caged will take to the new queen introduced with the second drive; to make sure against that, kill or remove the new queen.

Drones and Mating of Queen.

I have a colony of bees in which the queen has died. I gave them a frame of eggs from another colony and they have a queen all ready to hatch. I caught four drones in one of my neighbor's hives and put them in with the queenless colony. They were young drones; there are no drones or brood in any of the hives.

1. Will these young drones be of any service to the young queen when she makes her trip?

2. When the queen is hatched, how long is it before she makes her trip?

NEBRASKA.

ANSWERS.—1. They may; but they would have been just as likely to meet the young queen if you had left them where they were.

2. Five days or more.

Telling Age of Queens—Queen-Excluding Honey-Boards—Re-Queening—Uniting Weak Colonies, Etc.

1. How can I tell when a queen is one, two or three years old? I would like to requeen when they are two years old.

2. If I use queen-excluding honey-boards, when producing extracted honey, should the honey-boards be left on the year round, or taken off after the honey-flow? If taken off, at what time should they be put on again? My supers are left on the entire year.

3. If I buy Italian queens to replace old blacks or hybrids, how long must I wait after removing the old queen before putting in the new one by the cage they come in or by "drowning"?

4. When I examined my bees this spring, I found a great many of them with their brood and honey in the supers, while the combs in the lower story were empty. Why was this? And how can they be kept in the lower story unless I use excluders? I asked one bee-keeper about it and he said they had not been rightly prepared last fall.

5. A great many of my colonies do not seem to be as strong as

they should be, while a few of them are just boiling over with bees. Why is this? Do you think the weaker ones need requeening?

6. Would you advise me to take the queen from one of my strong Italian colonies during the honey-flow and introduce her to one of the weak colonies, and when the Italians have queen-cells sealed put them into the colonies that I wish to requeen in West cell-protectors? and can I put them in at the time I kill the old queens? I am running for extracted honey and want to keep bees for what money there is in the business.

7. In order to prevent after-swarms would you advise cutting out all queen-cells but one, or would you leave two or more?

8. The person who handled my bees last year divided some of the colonies after the honey-flow, and they came through the winter very weak, and had to be fed in the spring, and then I lost several by robbing. This year I want to unite weak colonies instead of divide. When would be the best time to do this? and about how weak do you think a colony should be to be a fit subject for uniting? Some of them had only bees enough to cover two frames last fall.

9. What is the best way to get a swarm of bees out of a tree?

10. How old were you when you began keeping bees? Do you think a man 41 years old too old to learn to handle them with profit? CALIFORNIA.

ANSWERS.—1. I don't know of any way you can tell except by keeping a record. When you clip a queen, make an entry of the fact in the record of that colony. So long as you find a clipped queen in that colony, you can know that the same queen is there, and the record shows her age. If, at the spring overhauling, for example, in 1904, you find a queen with whole wings, you know that there was a supersede the precious fall, and that a 1903 queen is before you, and if you want to supersede her at two years old you will wait till 1905. See "Forty Years Among the Bees," page 52.

2. The honey-boards may be taken off when the harvest is over; but if supers are left on there is no harm in leaving on honey-boards, too!

3. Opinions differ. Some think it better to put the queen in the hive (with a proper introducing cage) at the same time the old queen is removed, while others think it better to have the bees queenless two or three days. I don't know. When a flood of honey is coming in you can do almost any way.

4. If you allow the queen free range, she is pretty sure to lay sometimes in the upper story, and late in the fall may find more of the brood-nest in the super than in the lower story. Late in the season if you put all the brood in the lower story, you will be likely to find the brood-nest there in the spring.

5. It isn't the fault of the queen. Sometimes a colony will be found greatly reduced while having a good queen. It isn't easy to tell in all cases just why one colony should be weak in spring and another strong.

6. The plan you outline will generally succeed; but your Italian queen will be safer if, instead of giving her to another colony, you take her with one or two frames of her own brood and bees and form a nucleus.

7. Did you ever try the removal plan to prevent after-swarming. When the prime swarm issues, place it on the old stand with the old colony close beside it. A week later remove the old colony to a new stand. In most localities that will put an end to all swarming. If it doesn't work satisfactorily with you, and you must depend on cutting out queen-cells, then cut out all but one. If you leave two, there is just as much chance for an after-swarm as if you left twenty.

8. You are very wise to decide that you don't care to winter a lot of weaklings. Unite any time after the harvest is over. Not later than September. Better have in each hive enough bees to cover at least five combs.

9. Chop down the tree and split it open. Have ready a good smoker when the tree falls.

10. I was 30 years, 3 weeks, and 3 days old when I got my first colony, or rather when my wife got it for me, for she caught a runaway swarm. At 41 there are very few things a man ought to be too old to learn, and bee-keeping is not one of the few.

"Shaken Swarms Without Shaking."

On page 426 (1903) what was the further development of "Iowa's" plan? Will it work after grubs appear in the queen-cells?

I have had good results by putting the new brood-chamber filled with foundation below, the old brood-chamber bees and queen over a Porter bee-escape board above all; then after one day's flight, so all the old bees were below, or later as the case might be, introduce the queen below. I tried this one a few times but it worked well as far as tried. MAINE.

ANSWER.—I think "Iowa" did not report further. I tried the plan with one other colony; and while it might do for extracted honey it would not do for comb, for the bees carried down the black comb and capped the sections with it. Grubs in queen-cells would probably make no difference, unless trouble should be made by a young queen emerging. Your plan is probably better.



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FROM MANY FIELDS

Good Honey for Winter Stores.

All alive excepting part of the bees. The hives in some places were completely riddled excepting honey. Black honey or bottle-green honey, seems to give the bees cholera or dysentery. There are lots of very weak colonies, and some "playing out" every day, the weather being very cold and wet. Dandelions are out but the bees don't touch them yet. They are trying to work on fruit-bloom, but seem to get chilled and do not all get back. All the colonies that were relieved of the black stuff in the fall, and given good honey, are all right, and strong. I will try to keep doing that after this. E. H. STURTEVANT.
Washington Co., N. Y., May 20.

Poor Season in Arizona.

We have had a poor year. I got only 10 tons of extracted honey, lacking 2 cases, from 130 colonies, worked in two supers. My poorest colony, on scales, registered 14½ pounds; the best 30 to 35 pounds that day. Along comes a wind-storm with lots of sand; next day registered 4, 5, 6, 9. Another wind and sand-storm. I expected to get from 20 to 25 tons of honey. W. F. McDONALD.
Yuma Co., Ariz., May 19.

Wonderful White Clover Crop.

I placed 55 colonies of bees in the cellar the latter part of November, and carried them out Feb. 6. They had a fine flight, and I put them back the same evening. I put them out again to stay the last days of March—53 living, and 2 died of starvation. The temperature of the cellar was 42 degrees, and occasional ventilation from the door.

The spring is slow and wet, not over half of the corn being planted in the country yet, but the bees are building up finely. Swarming has commenced slightly, but it is still

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raining. Apple-tree bloom has been gone a week or more, and black and red raspberry, and white clover, are just blooming, and if it will just quit raining now, you will probably hear of good results from this part of the world. I will feed my bees every cloudy day for the next ten. We have a wonderful crop of white clover—never have seen it better.

S. A. MATSON.

Nodaway Co., Mo., May 29.

Good Prospects for a Honey-Flow.

I like the "old reliable" American Bee Journal fine, and would not like to be without it. I have been trying to get the name of a new subscriber to send with my own, but it seems that all the bee-keepers in this part of Kansas know all they wish to know about bees. One bee-keeper who has about 50 colonies told me if I wished to succeed with bees to let bee-papers and bee-books alone. I differ from him, however, and shall try to prove the contrary.

I have 12 colonies, one being a swarm hived yesterday. With the exception of one all are in good condition. Five of the colonies I bought this spring at \$3.00 per colony—my own choice of 16 colonies.

I commenced bee-keeping a year ago, buying 4 colonies at a sale for \$2.00. Last year was a poor one in eastern Kansas—so much rain during white clover season, and basswood did not bloom at all. My 4 colonies did not swarm, but I caught 2 stray swarms.

The prospects are good at present for a good honey-flow. White clover is just beginning to bloom.

HENRY L. HAGER.

Doniphan Co., Kans., May 28.

Sycamore Maple.

Can you identify the enclosed leaf and flower (a species of maple, I think)? Is it of any value as a honey-plant.

J. H. WALTERHOUSE.

Ontario, Canada, May 24.

[The flower is from the sycamore maple. As all maples yield honey of good quality this species has some value. See Prof. Cook's "Bee-Keeper's Guide," page 403. — C. L. WALTON.]

The Season in Ontario.

Apple-bloom has opened a week late, owing to cold and wet which returned last week. At present the heat is likely to dry it up before its time.

A trip towards Detroit, through Kent and Essex counties, showed clover badly killed, many fields being quite brown. Winter wheat is practically all gone in those counties. Here in Elgin County clover is injured, but by no means all killed. On light soil is where the loss is heaviest. Probably 70 percent of bees are dead throughout the Province, and the balance are in poor condition. The lateness of clover may give time for building up by stimulative feeding.

MORLEY PETTIT.

Ontario, Canada, May 25.

Home-Made Hives—Swarming.

I will describe how I make bee-hives. First, about 1858 or 1860, I got the right to make and use—not sell—the Langstroth hive. Then lumber was in the rough, and I had to saw and dress all of it myself. I could cut and dress every piece for a hive in one day. In the winter of 1902-03, I built a foot-power buzz-saw for \$7.50, and with it can cut every piece for a hive; and at \$35 per 1000 feet I made 14 hives, 8-frame, bottom 24x14 inches wide, 2 sides 20x13 inches deep, end-pieces 1½ inch plank 12 inches long and 12 deep. The ends are 12x12 which leaves an entrance 12 inches long and one inch deep at both ends, but the back is closed.

Now, take one end and 2 sides, nail them as they should be nailed. I have a board that fits in the hive so that the front end is in its place sure; I nail the body with a 12-penny nail, 4 in each end; this makes a solid body, no racking. I have a piece of hard wood ½ inch thick, 1 inch wide, with 8 holes to drive



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a nail $\frac{1}{4}$ inches apart. Take 16 lath-nails, cut off the heads, and drive one in each hole, so there will be 8 in each end; this completes the body of the hive.

The frames are 19-inch top-bar, 17-inch bottom-bar, and 11-inch end-bar. I have a board 19 inches long, 12 inches wide, with 4 strips $\frac{1}{4}$ inches wide; put on each end of board half an inch apart the thickness of the end-bar, cut the two off half an inch below the edge of the top-board, cut a V notch in the end of two inside pieces, so the V edge of the frame will fit it. Put a thumb-button on the outside cross-piece. Now put the end in place, turn the button, turn up the board, nail the top-bar, turn and nail the bottom-bar. When finished, turn the buttons, placing the thumbs on each corner of frame. It should come out easy and true.

Now take the frame and saw a kerf in each end of the top-bar, then put the nail that is in the end of the hive up through the saw-kerf of the frame; each frame will keep in its proper place. I number each frame from 1 to 8, with a lead-pencil, having 1 and 9 on the edge of the hive, just inside of end-bar, so I can place every frame back in the hive as the comb was built; no crowding.

I depend for increase by natural swarming, and, what is necessary for success, have a stand to set the hive on with a good, smooth board in front, so that the bees can enter freely. I have a light quart tin-dipper, and small light poles for handles to fit in the end of the dipper handle. If a swarm settles high, put the dipper on the pole; if low so you can get to them without the pole, take the dipper and as soon as the bees begin to settle dip them off and dump them in front of the entrance of the hive. Many times I have changed their course from the bough to the hive before half the bees had settled. I do not recollect ever having to cut off limbs to get my bees into the hive.

My honey-board is made of $\frac{5}{8}$ -inch boards, 13 inches long and 4 inches wide, with two strips $\frac{1}{4}$ inch square and 20 inches long nailed on the ends of five boards; this makes a good honey-board leaving $\frac{1}{4}$ inch space between the boards.

E. TUCKER.

Genesee Co., N. Y., May 10.

Good Prospect for White Clover.

We winter our bees on the summer stands, and they came through the winter in excellent condition, with little loss.

The prospect for a white clover honey crop could not be any better. MAX ZAHNER.

Johnson Co, Kans., May 18.

Plenty of Bloom.

We have had plenty of bloom the past four weeks in this locality, and the bees have been doing well ever since spring finally came. The loss in wintering was a little larger than usual. I have put on some supers of unfinished section, but the bees have not occupied them to any extent, so far. What we need is steady warm weather.

I think the American Bee Journal is getting better and more interesting every year.

PETER WESTRUM.

Hamilton Co., Iowa, May 20.

Heavy Fruit-Bloom—Introducing Queens.

There need not have been any winter loss of bees here, and was not, so far as I can hear. I did not lose any. The bees are working strong on a very heavy fruit-bloom, but they are not gaining in weight much; an average colony, on the scales, gains $\frac{1}{4}$ pound in four days. The nights are too cool, but a very few days will see us in the harvest. Last year the bees worked the same way at this time (May 15), and May 17 they gained in weight 4 pounds; then the next week started on from 6 to 7 pounds, and May 28 gained 11 pounds—it was the banner day of the year. Those weights are net gain.

I think I have the best way of introducing queens, it has always worked with me, and I tried it on a colony the other day that had a virgin queen, and they did not harm her for four days, and then I removed the young queen. It is simply by taking out the escort bees and

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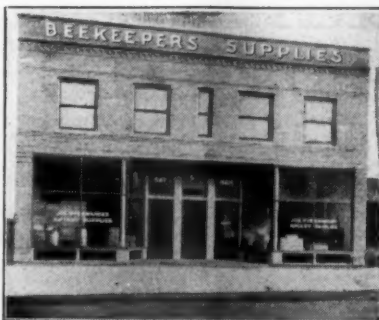
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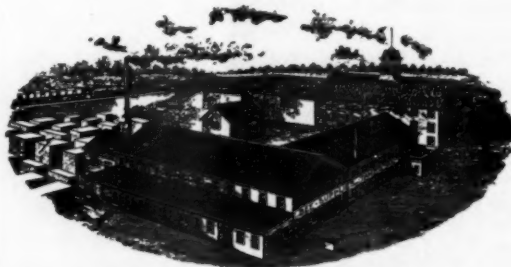
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A Little Message for To-Day's Life.

© 3

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One Untested Queen.....	\$.90
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" Selected ".....	1.40
" Breeder ".....	2.20
" Comb Nucleus (no Queen).....	1.10

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BOSTON, May 14.—The demand for honey is
extremely light, almost nothing, and supplies
are heavy for this time of the year, and our
prices therefore are largely nominal. We quote
fancy white at 15@16c; A No. 1, 14@15c; and
No. 1, 14c, with no call for under grades. Ex-
tracted, from 6@7c. BLAKE, SCOTT & LEE.

KANSAS CITY, April 18.—The demand for
honey is a little better than it has been. Prices
on strictly fancy comb are \$2.50 per case, if not
contracted; the great trouble with the majority of
honey coming from the West at present is that
it is more or less candied, and about \$2.00 to
\$2.25 is all we can get for it; amber is selling at
\$2.25 per case. Extracted is dull at 5@6c. Bees-
wax in good demand at 30c. C. C. CLEMONS & Co.

NEW YORK, May 21.—The market on comb
honey is decidedly dull and it is almost impos-
sible to move large blocks. What little trade
there is, is done in a small way. We quote
nominally: Fancy white at 13c; No. 1 at 12c,
and amber at 10c; no demand for dark at all.
Extracted is in fair demand at unchanged prices,
with a good supply. Beeswax remains firm
at 30c, but we expect a decline very shortly.
HILDRETH & SEGELKEN.

PHILADELPHIA, May 20.—The honey market
has been quiet for the last 10 days, and very
little doing. Some odd lots have been sold at
very low prices to clean out. The demand dur-
ing this spring-changeable weather has been
very light. There is no fancy comb honey on
the market. We quote: No. 1, 9@10c; amber,
8@9c. Fancy white extracted, 7@7¼c; amber,
6¼@7c. Beeswax has been received in large
quantities; prices are a little off. We quote:
Bright yellow, 30c; dark, 28@29c.

We are producers of honey and do not handle
on commission. WM. A. SELSER.

SAN FRANCISCO, May 25.—White comb, 1-lb.
sections, 12¼@13c; amber, 9@11c. Extracted,
white, 5¼@6c; light amber, 5@5½c; amber,
3¾@4¼c; dark amber, 3¼@3¾c. Beeswax, good
to choice, light, 28@30c; dark, 26@27¼c.

There are no great quantities of honey on the
market at present, neither is there much de-
mand. For desirable qualities there is a toler-
ably firm tone to the market. The coming crop
in this State will be light; there will be little
or no honey produced this year south of
Tehachapi.

HONEY AND BEESWAX

When consigning, buying or selling, consult
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199 SOUTH WATER ST. CHICAGO, ILL.

WANTED! FANCY COMB HONEY

In no-drip shipping-cases. Also Amber Ex-
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324½ Front and Walnut, CINCINNATI, OHIO

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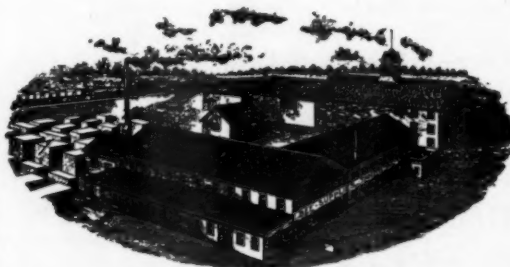
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prices therefore are largely nominal. We quote
fancy white at 15@16c; A No. 1, 14@15c; and
No. 1, 14c, with no call for under grades. Ex-
tracted, from 6@7c. BLAKE, SCOTT & LEE.

KANSAS CITY, April 18.—The demand for
honey is a little better than it has been. Prices
on strictly fancy comb are \$2.50 per case, if not
candied, the great trouble with the majority of
honey coming from the West at present is that
it is more or less candied, and about \$2.00 to
\$2.25 is all we can get for it; amber is selling at
\$2.25 per case. Extracted is dull at 5@6c. Bees-
wax in good demand at 30c.

C. C. CLEMONS & Co.

NEW YORK, May 21.—The market on comb
honey is decidedly dull and it is almost impos-
sible to move large blocks. What little trade
there is, is done in a small way. We quote
nominally: Fancy white at 13c; No. 1 at 12c,
and amber at 10c; no demand for dark at all.
Extracted is in fair demand at unchanged prices,
with a good supply. Beeswax remains firm
at 30c, but we expect a decline very shortly.

HILDRETH & SEGELKEN.

PHILADELPHIA, May 20.—The honey market
has been quiet for the last 10 days, and very
little doing. Some odd lots have been sold at
very low prices to clean out. The demand dur-
ing this spring-changeable weather has been
very light. There is no fancy comb honey on
the market. We quote: No. 1, 9@10c; amber,
8@9c. Fancy white extracted, 7@7¼c; amber,
6½@7c. Beeswax has been received in large
quantities; prices are a little off. We quote:
Bright yellow, 30c; dark, 28@29c.

We are producers of honey and do not handle
on commission. WM. A. SELSER.

SAN FRANCISCO, May 25.—White comb, 1-lb.
sections, 12½@13c; amber, 9@11c. Extracted,
white, 5½@6c; light amber, 5@5½c; amber,
3¾@4¼c; dark amber, 3¾@3¾c. Beeswax, good
to choice, light, 28@30c; dark, 26@27¼c.

There are no great quantities of honey on the
market at present, neither is there much de-
mand. For desirable qualities there is a toler-
ably firm tone to the market. The coming crop
in this State will be light; there will be little
or no honey produced this year south of
Tehachapi.

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